

REMARKS

The rejection of Claims 1-6 and 8 under 35 U.S.C. § 102(b) as anticipated by U.S. 5,457,003 or equivalent JP 04-338958 or equivalent EP 466025 (Tanaka et al) is respectfully traversed. Tanaka et al discloses a negative working resist material comprising a polysiloxane obtained by hydrolysis and condensation with dehydration of one or more alkoxy silanes having an oxirane ring, or a mixture of the alkoxy silane(s) having an oxirane ring and one or more alkoxy silanes having no oxirane ring, and an acid generator (Abstract). However, Tanaka et al discloses and suggests nothing with regard to using their negative working resist material in any other environment, such as to form an optical waveguide. In addition, while Tanaka et al may disclose the use of photolithography for forming their resist material, there is no disclosure or suggestion to use photolithography to form an optical waveguide.

For the above reasons, it is respectfully requested that the rejection over Tanaka et al be withdrawn.

The rejection of Claims 1, 2, and 4-8 under 35 U.S.C. § 102(e) as anticipated by U.S. 6,537,723 (Toyoda et al), is respectfully traversed. Toyoda et al discloses a photo-sensitive composition for optical waveguides comprising an organic oligomer, a polymerization initiator, and a crosslinking agent, wherein the organic oligomer may be a silicone oligomer represented by formula (2) therein, as one of the preferred embodiments. In said formula (2), the oligomer is derived from an epoxy group-containing phenyl silane. In other embodiments, the crosslinking agent and/or polymerization initiator can be an epoxy group-containing silane (column 8, line 50 ff). However, while a number of the embodiments of Toyoda et al may thus be based on an organopolysiloxane having hydrolyzable epoxy groups, none of Toyoda et al's organopolysiloxanes could possibly have the same structure as the alkali-soluble organopolysiloxanes recited in the present claims. Since Toyoda et al begins

with an oligomer, and then further crosslinks, the fundamental unit structure of the oligomer necessarily remains in the final polymer. The presently-recited alkali-soluble organopolysiloxane, on the other hand, is derived from the (co)hydrolytic condensation of silane **monomers**. Therefore, the structure of the presently-recited alkali-soluble organopolysiloxane is necessarily more random than that of Toyoda et al. In addition, Toyoda et al does not disclose the use of an acid catalyst, or distilling off alcohol formed and any solvent present by heating, thereby yielding a (co) hydrolytic condensate having silanol groups.

Claims 13-16 are separately patentable, since formula (2) of the Toyoda et al requires a phenyl moiety on the epoxy-substituted, Si-containing group.

For the above reasons, it is respectfully requested that the rejection over Toyoda et al be withdrawn.

The rejection of Claim 4 under 35 U.S.C. § 102(b) as anticipated by U.S. 6,207,728 (Sekiguchi et al) is respectfully traversed. Sekiguchi et al discloses a photo-curable composition comprising a particular hydrolyzable silane compound, a photoacid generator, and a dehydrating agent. But Sekiguchi et al neither discloses nor suggests the presently-recited alkali-soluble organopolysiloxane, or an optical waveguide formed from said alkali-soluble organopolysiloxane. Accordingly, it is respectfully requested that this rejection be withdrawn.

The rejection of Claims 1-3 and 5-8 under 35 U.S.C. § 112, second paragraph, is respectfully traversed. The term “general” before “formula” has been omitted in the present claims, although it is respectfully submitted that the term “general formula” is well-known. Regarding the terms “forming” and “photolithography”, the Examiner finds that these terms are not clear. In reply, forming optical waveguides by lithography is notoriously well-known, as supported by, for example, Toyoda et al supra, at column 6, line 28 ff. Since the claims

are directed to persons skilled in the art, it is clear that the above-quoted terms would be understood.

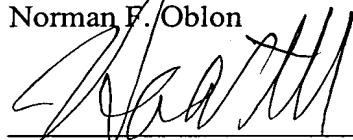
For the above reasons, it is respectfully requested that this rejection be withdrawn.

All of the presently-pending claims in this application are now believed to be in immediate condition for allowance. Accordingly, the Examiner has respectfully requested to pass this application to issue.

Respectfully submitted,

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